

COMPLETE LISTING OF THE CLAIMS

The following lists all of the claims as presented for further examination in the above-identified patent application.

1. (Currently Amended) A structure comprising:
a device that emits an optical signal from a ~~top-face~~ major surface of the device;
a sub-mount containing electrical traces that are electrically connected to the device; and
a cap attached to the sub-mount so as to form a cavity enclosing the device, wherein the cap includes an optical element in a path of the optical signal; and an alignment post that is glued to the cap and aligned with the path of the optical signal.
2. (Original) The structure of claim 1, wherein the sub-mount further comprises: internal bonding pads that are within the cavity and connected to the device; and external terminals that electrically connect to the internal bonding pads and are accessible outside the cavity.
3. (Original) The structure of claim 1, wherein bonding of the cap to the sub-mount hermetically seals the cavity.
4. (Original) The structure of claim 1, wherein the cap comprises:
a spacer ring attached to the sub-mount; and
a plate attached to the spacer ring.
5. (Original) The structure of claim 4, wherein the optical element is formed on the plate.
6. (Original) The structure of claim 4, wherein the spacer ring comprises a silicon substrate having a hole formed therethrough.
7. (Original) The structure of claim 6, wherein the plate comprises a glass plate.
8. (Original) The structure of claim 4, wherein the plate comprises a glass plate.

9. (Currently Amended) The structure of claim 1, ~~further comprising a wherein~~ the alignment post attached is glued to the cap where the optical signal emerges from the cap.

Claims 10-15 (Canceled)

16. (New) The structure of claim 1, wherein flip-chip bonding electrically connects bonding pads on a front face of the device to the electrical traces in the sub-mount, and the optical signal emerges from a back face of the device.

17. (New) The structure of claim 1, wherein the optical element comprises a lens.

18. (New) An optical device package comprising:
a device that emits an optical signal from a major surface of the device;
a sub-mount containing electrical traces that are electrically connected to the device;
a cap attached to the sub-mount so as to form a cavity enclosing the device;
an optical element residing within the cavity on an interior surface of the cap and in a path of the optical signal; and
an alignment post glued to an exterior surface of the cap and aligned with the path of the optical signal.

19. (New) The package of claim 18, wherein the device comprises a VCSEL.

20. (New) The package of claim 18, wherein the sub-mount comprises a semiconductor substrate.

21. (New) The package of claim 18, wherein flip-chip bonding electrically connects bonding pads on a front face of the device to the electrical traces in the sub-mount, and the optical signal emerges from a back face of the device.

22. (New) The package of claim 18, the cap comprises a semiconductor substrate.

23. (New) The package of claim 18, wherein bonding of the cap to the sub-mount hermetically seals the cavity.

24. (New) The package of claim 18, wherein the alignment post is glued to the cap where the optical signal emerges from the cap.

25. (New) The package of claim 24, wherein the alignment post comprises a hollow cylinder having an inner diameter larger than a beam profile of the optical signal.

26. (New) The package of claim 18, wherein the optical element comprises a lens.